


Symbol	Name	Synonyms	Organism
	CSF2 colony stimulating factor 2 (granulocyte-macrophage)	Colony-stimulating factor, CSF, GM-CSF, GM-CSF, Granulocyte-macrophage colony-stimulating factor precursor, MGC131935, MGC138897, Molgramostin, Sargramostim	Homo sapiens

Wiki Genes [edit this page](#) [new](#)

UniProt [P04141](#), [Q2VPI8](#), [Q8NFI6](#)

PDB Structure [1CSG](#), [2GMF](#), [138960](#) [more than 1,500 organisms. 80,000 genes. 15 million sentences. ...always up to date - every day.](#)

OMIM [1437](#)  
 NCBI Gene [NP\\_000743](#)  
 NCBI RefSeq [NM\\_000758](#)  
 NCBI RefSeq [1437](#)  
 NCBI UniGene [P04141](#)



Nature Pathways [P04141](#)



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Granulocyte-colony stimulating factor (G-CSF ) and granulocyte-macrophage-colony stimulating factor (GM-CSF ) belong to a family of glycoprotein growth factors required for the survival, growth and differentiation of haematopoietic precursors and which affect the function of circulating mature cells. [1989]





The haematopoietic factors granulocyte-macrophage colony-stimulating factor (GM-CSF ) and granulocyte colony-stimulating factor (G-CSF ) prime neutrophils to be more responsive to a variety of stimuli. [1986]






The effect of these supernatants as a source of recombinant IL-3  was compared to that of recombinant human granulocyte-macrophage colony-stimulating factor (GM-CSF ) and granulocyte colony-stimulating factor (G-CSF ) as well as to that of medium conditioned by phytohemagglutinin-stimulated leukocytes. [1987]





Stimulatory activity was significantly greater than in the presence of GM-CSF  and was comparable to that of granulocyte colony-stimulating factor (G-CSF ) interleukin 3 (IL-3 ) and 5637 cell line supernatant (SN). [1992]






We demonstrate that U87MG can be induced to increase its production of GM-CSF  and G-CSF  by exposure to TNF-alpha  while U373MG is induced to produce GM-CSF  but not G-CSF . [1991]

Production of TNF  and monocyte-mediated cytotoxicity against U937 tumor cells was significantly increased in monocytes derived from patients receiving GM-CSF , as compared to those from the control group, while no effect was detectable in monocytes from patients with G-CSF  therapy. [1995]




IL-4  stimulates G-CSF -induced colony-forming unit-granulocyte (CFU-G) and inhibits all colony types induced by GM-CSF  and IL-3  in the HLA-DR++ population, but not in the HLA-DR+ population. [1993]




We have now developed a method for obtaining a large number of DCs by treating the granulocyte colony-stimulating factor (G-CSF ) mobilized peripheral blood stem cells (PBSCs) from healthy donors with granulocyte-macrophage colony-stimulating factor (GM-CSF ) interleukin-4  (IL-4 ) and tumor necrosis factor-alpha (TNF-alpha ). [2001]



However, SCF  potentiated the stimulatory effect of GM-CSF , G-CSF , and IL-3  on both 3H-TdR incorporation and colony formation. [1992]

CD34+ cells enriched from bone marrow were cultured for up to 5 weeks in interleukin-3 (IL-3 ) granulocyte-macrophage colony-stimulating factor (GM-CSF ) and granulocyte colony-stimulating factor (G-CSF ) with or without stem cell factor (SCF ) (also termed c-kit ligand ). [1993]

Our data also show that G-CSF  and GM-CSF -stimulated monocytes can mediate cytotoxicity of target leukemia cells comparable to that of IFN-gamma -stimulated monocytes. [1995]

Gamma-interferon (IFN-gamma ) and granulocyte-macrophage colony-stimulating factor (GM-CSF ) have been reported to suppress NAP induction with G-CSF . [1992]

In the next 11 patients, stem cells were harvested after CT + granulocyte colony-stimulating factor (G-CSF ) and lymphocytes were harvested after CT + granulocyte-macrophage colony-stimulating factor (GM-CSF ) and interleukin-2 . [2002]

We examined the ability of proinflammatory cytokines such as TNFalpha, IL-1 , and G-CSF  to induce this process